What is claimed is:

1. A duct connection assemble comprising:

a joint duct having a branch duct and a saddle flange formed on a lower portion of said branch duct;

a main ribbed duct having an upper side opening and a plurality of ribs formed around said upper side opening;

a rubber sealant having streaks of rib-fitting grooves to be fit into said ribs, and having a communication hole which is to be communicated with said upper side opening;

a plurality of recesses provided on an upper surface of said rubber sealant to be positioned between said rib-fitting grooves;

a plurality of protuberances provided on a lower surface of said saddle flange to be fit into said recesses;

a plurality of water sealing small projective rings provided on a lower surface of said rubber sealant in correspondence to said recesses to concentrically surround said communication hole;

whereby upon connecting said saddle flange of said joint duct to said main ribbed duct through said communication hole, said rubber sealant is interposed between said saddle flange and a circumferential area of said communication hole so that said protuberances uniformly press said rubber sealant substantially through said recesses to tightly engage said saddle flange

against an outer surface of said main ribbed duct through said rib-fitting grooves and said water sealing small projective rings.

2. The duct connection assemble according to claim 1, wherein a rubber seal ring is provided to liquid-tightly seal between said saddle flange and a circumferential area of said communication hole, said rubber seal ring being formed in one piece with said rubber sealant.

3. The duct connection assemble according to claims 1 and 2, wherein a pawl stopper is rotationally supported on an inner wall of said branch duct, said pawl stopper having a hook portion which engages with an inner edge of said communication hole.

4. The duct connection assemble according to claim 1, wherein said rubber sealant is made of an water-expandable rubber.

5. The duct connection assemble according to claim 1, wherein an inner surface of said recesses of said rubber sealant is tapered to progressively increases a breadth toward an exterior portion of said recesses.

6. The duct connection assemble according to claim 1, wherein a breadth of said protuberances is slightly greater than that of said recesses so that said protuberances elastically expand said recesses when fitting said protuberances into said recesses.

7. The duct connection assemble according to claim 4, wherein said water-expandable rubber is formed by mixing

an water-absorptive resin with styrene butadiene rubber and isoprene rubbner, otherwise by mixing an water-absorptive resin with chloroprene rubber.

8. The duct connection assemble according to claim 1, wherein said rubber sealant is in the form of rectangular frame which has a rectangular communication hole, an outer peripheral area of said rubber sealant having said recesses.

9. The duct connection assemble according to claim 1, wherein said rib-fitting grooves are 2 to 3 mm in breadth, and said water sealing small projective rings are 1 to 3 mm in both breadth and height.

10. The duct connection assemble according to claim 1, wherein a plurality of small ribs are formed between said ribs, said rib-fitting grooves having narrow and deep grooves fit into said ribs and grooves of small depth fit into said small ribs.

11. The duct connection assemble according to claim 1, wherein a wire band is provided to tightly bind said saddle flange to said main ribbed duct.

12. A duct connection assemble comprising:

a branch duct connected to a joint duct which has a saddle flange formed on a lower portion of said joint duct;

a main duct having an upper opening in correspondence to said joint duct;

a rubber sealant having a communication hole which

is to be in communication with said upper opening of said main duct;

a plastic stopper plate having substantially an L-shaped cross section and rotationally supported on an inner wall of said branch duct, said stopper plate having a hook portion which engages through said rubber sealant with an inner edge located around said upper opening of said main duct;

said stopper plate having:

(a) said hook portion forming an acute angle against a vertical wall of said stopper plate;

(b) an L-shaped cavity substantially formed on either a vertical wall of said stopper plate or an inner wall of said branch duct, said cavity having a lateral portion and a vertical portion;

(c) a pin secured to either said vertical wall of said stopper plate or said inner wall of said branch duct;

(d) said vertical wall being vertically movably supported by a pin-and-groove combination; and

(e) said pin being admitted through said lateral portion and moved into said vertical portion of said L-shaped cavity when said stopper plate is rotationally and vertically moved through said pin-and-groove combination so as to engage said hook portion with said inner edge located around said upper opening in accompany with an elastic deformation of said hook portion.

13. A duct connection assemble comprising:

a branch duct connected to a joint duct which has a saddle flange formed on a lower portion of said joint duct;

a main duct having an upper opening in correspondence to said joint duct;

a rubber sealant having a communication hole which is to be in communication with said upper opening of said main duct;

a plastic stopper plate having substantially an L-shaped cross section and rotationally supported on an inner wall of said branch duct, said stopper plate having a hook portion which engages through said rubber sealant with an inner edge located around said upper opening of said main duct;

said stopper plate having:

(a) said hook portion warped downward to define a curved plane;

(b) an L-shaped cavity substantially formed on either a vertical wall of said stopper plate or an inner wall of said branch duct, said cavity having a lateral portion and a vertical portion;

(c) a pin secured to either said vertical wall of said stopper plate or said inner wall of said branch duct;

(d) said vertical wall being vertically movably supported by a pin-and-groove combination; and

(e) said pin being admitted through said lateral portion and moved into said vertical portion of said L-

shaped cavity when said stopper plate is rotationally and vertically moved through said pin-and-groove combination so as to engage said hook portion with said inner edge located around said upper opening in accompany with an elastic deformation of said hook portion.

14. A duct connection assemble comprising:

a branch duct connected to a joint duct which has a saddle flange formed on a lower portion of said joint duct;

a main duct having an upper opening in correspondence to said joint duct;

a rubber sealant having a communication hole which is to be in communication with said upper opening of said main duct;

a plastic stopper plate having substantially an L-shaped cross section and rotationally supported on an inner wall of said branch duct, said stopper plate having a hook portion which engages through said rubber sealant with an inner edge located around said upper opening of said main duct;

said stopper plate having:

(a) said hook portion having a stepped portion to define a slantwise plane successively elevated toward an tip end of said hook portion;

(b) an L-shaped cavity substantially formed on either an vertical wall of said stopper plate or an inner wall of said branch duct, said cavity having a lateral portion

and a vertical portion;

(c) a pin secured to either said vertical wall of said stopper plate or said inner wall of said branch duct;

(d) said vertical wall being vertically movably supported by a pin-and-groove combination; and

(e) said pin being admitted through said lateral portion and moved into said vertical portion of said L-shaped cavity when said stopper plate is rotationally and vertically moved through said pin-and-groove combination so as to engage said hook portion with said inner edge located around said upper opening in accompany with an elastic deformation of said hook portion.

15. The duct connection assemble according to claim 12, wherein a right-angled triangle piece is provided on both sides of said hook portion, said right-angled triangle piece forming an acute angle against a vertical wall of said stopper plate.

16. The duct connection assemble according to claim 12, wherein said rubber sealant is made of an water-expandable rubber.

17. The duct connection assemble according to claim 16, wherein said water-expandable rubber is formed by mixing an water-absorptive resin with styrene butadiene rubber and isoprene rubbner, otherwise by mixing an water-absorptive resin with chloroprene rubber.

18. The duct connection assemble according to claim 12, wherein a wire band is provided to tightly bind said

saddle flange to said main duct.